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REPORT OF THE

SECOND SESSION OF THE CARIBBEAN PLANT PROTECTION COMMISSION

Held at Santo Domingo,
Dominican Republic
10–15 August 1970

COMMONWEALTH MYCOLOGICAL INSTITUTE
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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Meeting Report
AGP: 1970/M/10

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Rome, 1971

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I. INTRODUCTION

The Caribbean Plant Protection Commission was established by the Forty-Eighth Session of the FAO Council through Resolution No. 8/48 in 1967. The text of the Resolution is given in Appendix B to the Report of the First Session of the Caribbean Plant Protection Commission. This First Session was convened at Paramaribo, Surinam, from 15 to 21 July 1968, with delegates from eight member governments and two observers participating.

The Second Session of the Caribbean Plant Protection Commission was convened at Santo Domingo, Dominican Republic, from 10 to 15 August 1970, through the courtesy of the Government of the Dominican Republic. At the time the Session was convened, all governments which have territories in the Caribbean Region were members of the Commission. These were those of Barbados, Cuba, Dominican Republic, France, Guyana, Haiti, Jamaica, Netherlands, Trinidad and Tobago, United Kingdom and the United States of America. Consequently invitations for representation at the Second Session had been extended to all the eleven governments in the Region. Invitations to send observers were also extended to the Caribbean Food Crop Society and the Organismo Internacional Regional de Sanidad Agropecuaria (OIRSA). In addition, the Caribbean Free Trade Association was also invited to send an observer. Nine delegations and one of the invited observers participated in the Session which was held in the Hotel Embajador in Santo Domingo. In addition, an observer from the U.S. AID was also present.

The Second Session was inaugurated by Dr. Ian Kelton, FAO Representative for the Caribbean Area. His Excellency Lic. Carlos Rafael Goico Morales, Vice-President of the Dominican Republic, addressed the Session and welcomed the participants to Santo Domingo in the name of His Excellency, Dr. Joaquín Balaguer, President of the Dominican Republic. His Excellency outlined the growth of plant protection activities in the Dominican Republic, reviewed the development of the existing plant quarantine services and stressed the interest of his country in the Caribbean Plant Protection Commission. Briefly discussed was the need for international measures to prevent the unrestricted spread of plant pests and diseases, as well as the efforts made by the agriculturalists of the Dominican Republic to produce agricultural products as free as possible of plant pests and diseases in order to prevent the spread of the same through international commerce.

Welcoming the delegates and observers on behalf of the Director-General of the Food and Agriculture Organization of the United Nations, Dr. Kelton briefly reviewed the establishment of the Caribbean Plant Protection Commission and stressed the importance of this body to inter-governmental cooperation in plant quarantine in the Caribbean Region. He also briefly discussed the five areas in which FAO is concentrating its efforts to increase agricultural production in the developing countries and which are: (1) high yielding varieties of cereals; (2) the bridging of the protein gap; (3) the war on waste; (4) the fullest utilization of human resources; and (5) the increased production and conservation of foreign exchange in developing countries. Mention was made of the threat posed to the Caribbean Region by the presence of the coffee rust which has been recently reported from Brazil. Dr. Kelton concluded by expressing, on behalf of FAO, thanks to the Government of the Dominican Republic for inviting the Session to be held at Santo Domingo, as well as to His Excellency, the Vice-President of the Republic and the Honourable Secretary of Agriculture for addressing and opening the Session.

The Honourable Lic.Fernando Alvarez Bogaert, Secretary of Agriculture,urged the participants to the Second Session of the Caribbean Plant Protection Commission to adopt measures that would prevent the further spread of, as well as eradicate, plant pests and diseases, especially the coffee rust. He further expressed the hope that the achievements of the Second Session of the Commission would result in benefits for the Region's agriculture.

In closing the Inaugural Session, Mr. George H. Berg, FAO Agricultural Officer, stressed the importance of preventing the introduction of pests and diseases new to the region, as well as preventing the further spread of those of limited distribution within the region. Emphasis was also placed on the importance of international cooperation in plant protection, and especially plant quarantine.

The Agenda of the Session, as adopted, is given in Appendix A.

II. PARTICIPATION IN THE SESSION

DELEGATES OF PARTICIPATING GOVERNMENTS

Barbados

Dr. V. KUMAR	Head, Plant Quarantine Ministry of Agriculture P.O. Box 505 Bridgetown, Barbados (W.I.)

Dominican Republic

Ing. Nelson GONZALEZ	Director, Plant Protection Department Secretaría de Estado de Agricultura Santo Domingo, Dominican Republic
Dr. Fabio SUERO	Director, Plant Quarantine Secretaría de Estado de Agricultura Santo Domingo, Dominican Republic
Mr. Eligio HICHIEZ FRIAS	Director, Plant Protection Laboratory Secretaría de Estado de Agricultura Santo Domingo, Dominican Republic
Mr. Manuel FELIZ	Plant Quarantine Inspector Secretaría de Estado de Agricultura Santo Domingo, Dominican Republic
Mr. Ernesto LOZADA	In-Charge of Bio-Statistics Plant Protection Secretaría de Estado de Agricultura Santo Domingo, Dominican Republic
Mr. Amaury RODRIGUEZ	Agronomist Secretaría de Estado de Agricultura Santo Domingo, Dominican Republic

France

Mr. D.A. BLANCHE	Chief, Plant Protection Service (Antilles and French Guiana) B.P. 241 Fort de France, Martinique

Guyana

Dr. B.K. RAI	Entomologist, Central Agricultural Station Mon Repos, East Coast Demerara, Guyana

Jamaica

Mr. A.G. NAYLOR	Chief, Plant Protection Officer Ministry of Agriculture P.O. Box 480 Hope, Kingston, Jamaica
Mr. Z.A. DANIELS	Chief Plant Quarantine Inspector Ministry of Agriculture P.O. Box 480 Hope, Kingston, Jamaica

Netherlands

Mr. F.A. DEL PRADO	Head, Plant Protection and Production Division Ministry of Agriculture, Animal Husbandry and Fisheries P.O. Box 160 Paramaribo, Surinam
Mr. James L. SUARES	Technical Officer Reigerweg 19 Cas Cora, Curacao Netherlands Antilles

Trinidad and Tobago

Dr. V.C.R. HENRY	Technical Officer (Research) Central Experiment Station Ministry of Agriculture Centeno, Trinidad

United States of America

Mr. F.A. JOHNSTON	Director Agricultural Quarantine Inspection Division Agricultural Research Service United States Department of Agriculture Federal Center Building Hyattsville, Maryland 20782
Mr. Mitchell SLOBODNIK	Inspector-in-Charge Agricultural Quarantine Inspection Division Agricultural Research Service United States Department of Agriculture P.O. Box 3386 San Juan, Puerto Rico 00904

OBSERVERS

United Kingdom

Mr. Anthony W. PEERS	Agricultural Adviser British Development Division in the Caribbean P.O. Box 167 Bridgetown, Barbados

United Kingdom (continued)

Mr. George L. OGILVIE	Chief Plant Protection Officer Ministry of Agriculture Premier's Office St. Georges, Grenada
Mr. A. CRUICKSHANK	Chief Technical Officer (Agronomy and Research) Ministry of Agriculture Grenada
Mr. H.A.L. FRANCIS	Director of Agriculture Department of Agriculture Antigua

Caribbean Food Crops Society

Dr. George SAMUELS	Agricultural Redsearch Consultant Agricultural Experiment Station University of Puerto Rico Rio Piedras, Puerto Rico
Dr. A. SOTOMAYOR-RIOS	Plant Breeder-in-Charge Corozal Substation University of Puerto Rico Agricultural Experiment Station Corozal, Puerto Rico 00643
Mr. Francisco APONTE	Tropical Horticulture Adviser (USAID) Secretaría de Estado de Agricultura Santo Domingo, Dominican Republic

CARIFTA (Caribbean Free Trade Association)

Mr. Prem ARJOON	Economist CARIFTA Secretariat Commonwealth Caribbean Regional Secretariat Bank of Guyana Bldg. Georgetown, Guyana

Dominican Republic

Dr. Gerhard JURGENS	Plant Pathologist (German Adviser to Government of the Dominican Republic) Secretaría de Estado de Agricultura Santo Domingo, Dominican Republic

USAID/DR

Mr. Melvin FREE	Entomology Adviser Agency for International Development Santo Domingo, Dominican Republic

Organization of American States (Inter-American Institute of Agricultural Sciences)

Mr. Julio RINGUELET	Oficial Representative Organization of American States Centro de los Héroes Santo Domingo, Dominican Republic

FAO STAFF

Dr. I. KELTON	Senior Agricultural Adviser/FAO Country Representative in the Caribbean Region FAO of the United Nations P.O. Box 1071 Port-of-Spain, Trinidad
Mr. George H. BERG	FAO Agricultural Officer (Plant Quarantine) Plant Production and Protection Division FAO of the United Nations Rome, Italy
Mr. A.L. BROWN	FAO Agricultural Officer (Plant Quarantine) FAO of the United Nations P.O. Box 1071 Port-of-Spain, Trinidad
Dr. A. MITTELHOLZER	FAO Agricultural Officer (Plant Pathology) Santiago Dominican Republic

OFFICERS OF THE COMMISSION

Ing. Nelson Gonzales, Director, Plant Protection Department, Secretaría de Estado de Agricultura, Dominican Republic, and Head of the Dominican Republic delegation, was unanimously elected Chairman. Subsequently Mr. Arthur G. Naylor, Head of the Jamaica delegation was elected Vice-Chairman. Mr. Mitchell Slobodnik of the United States of America and Dr. V. Kumar of Barbados were elected members of the Executive Committee. Mr. A.L. Brown served as Technical Secretary.

Named to serve on the Drafting Committee were: Mr. F.A. Johnston, U.S.A.; Mr. A. Cruickshank, Grenada; Mr. F.A. del Prado, Surinam.

III. PRESENT STATUS OF THE CARIBBEAN PLANT PROTECTION COMMISSION

At the time of the Second Session, governments of the following eleven countries were members of the Caribbean Plant Protection Commission:

Country	Date of Instrument of Adherence	Date of Receipt of Instrument
Barbados	24 May 1968	17 June 1968
Cuba	4 October 1967	13 October 1967
Dominican Republic	2 December 1967	11 December 1967
France	7 October 1967	11 October 1967
Guyana	5 October 1967	12 October 1967
Haiti	17 April 1968	29 April 1968
Jamaica	24 October 1967	1 November 1967
Netherlands	16 February 1968	22 February 1968
Trinidad and Tobago	13 May 1968	21 May 1968
United Kingdom	27 September 1967	29 September 1967
United States	13 November 1967	14 November 1967

The United Kingdom has, however, informed FAO that it does not wish to retain full membership in the Commission and requested that in the future it be invited instead in an observer capacity to the sessions.

The United Kingdom will continue to be invited as a full member to ad hoc regional meetings which are not sessions of established bodies. If it prefers to attend in an observer capacity it will so inform the Organization.

IV. REVIEW OF PLANT QUARANTINE ACTIVITIES IN THE REGION

Delegations from member countries presented the following information concerning their plant quarantine organizations, legislation and services, as well as providing lists of plant pests and diseases, both existing and of quarantine importance.

1. BARBADOS

During the period Barbados has been a member of the Caribbean Plant Protection Commission, many improvements have been made in the implementation of its plant quarantine services.

At careenage and pierhead where most of the inter-island schooners discharge cargo, all plants and plant products are inspected to determine the presence or absence of any destructive pests or diseases, as well as prohibited items. Previously no inspections were carried out at these locations.

A room for plant quarantine personnel and inspection facilities has been provided at the airport. All incoming flights are reviewed and are subject to inspection. Plant quarantine inspectors have been provided with temporary identification badges and an effort is now being made to secure uniforms. Plant quarantine services are provided on holidays and week ends, as well as at night during the week when required.

Due to a shortage of plant quarantine personnel and the fact that existing legislation does not authorize the boarding of carriers for plant quarantine inspection, arriving vessels and aircraft are not being boarded. At the present time only two full time and two part time plant quarantine inspectors are available for all assignments. However, consideration is now being given to revising and improving existing plant quarantine legislation so as to have it in conformity with the guidelines for plant quarantine legislation as approved by the Commission.

The Mediterranean fruit fly traps obtained on loan from the United States Department of Agriculture were placed in different parts of the island and regularly inspected. No Mediterranean fruit flies have been found.

During the last two years specimens of chinch bug (Blissus leucopterus) and cabbage bud worm (Hellula phidelialis) have been observed. These two species have been noted attacking lawngrass and cabbages respectively and are currently controlled with pesticides.

2. DOMINICAN REPUBLIC

The Plant Quarantine Division is included as part of the Department of Plant Protection,Ministry of Agriculture, and the Director of the Department is responsible for the administration of all plant quarantine activities. The Division staff consists of five agricultural school graduates and 21 trained persons, all of whom are engaged in plant quarantine activities at the International Airport of the Americas, at Santiago and the maritime ports of Santo Domingo, Haina, San Pedro de Macorís, La Romana, Barahona and Pepillo Salcedo. The plant quarantine inspectors are authorized to issue phytosanitary certificates and other pertinent documents.

Plant quarantine legislation and decrees regulate the introduction of plants and plant products. Importers are obliged to secure an import permit and upon arrival the plants and plant products are subject to inspection. Some plant treatment is carried out. Intercepted plant pests and diseases are sent to the laboratories of the National Center of Plant and Animal Investigations at San Cristobal for identification.

However, the national plant quarantine services need strengthening owing to a lack of trained staff, lack of plant treatment equipment and shortage or lack of laboratories and glasshouses at the ports of entry.

During October 1969, a Plant Quarantine Course on a national level was presented with FAO assistance at which approximately 25 plant quarantine inspectors and 30 students participated. Both the theory and practical aspects of plant quarantine were presented at this highly successful course.

Plant pest and disesse control programs established under authority based on legislation and decrees relating to the movement and control of existing plant pests and diseases are also in operation.

3. FRANCE

During the period following the First Session of the Commission in Paramaribo, Surinam, no changes have occurred in the plant protection legislation and regulations for the Caribbean Zone. It should be mentioned, however, that the obligatory phytosanitary controls as authorized by the phytosanitary regulations are carried out within the national territory of the overseas French Departments of Guadeloupe, French Guiana and Martinique as required, in connection with the importation of plants and plant material and for agricultural products offered for exportation.

Engineers and qualified agents of the Plant Protection Service are responsible for all activities in connection with the afore-mentioned phytosanitary services which are designed to prevent the introduction of new plant pests and diseases into the national territory, as well as prevent the infestation or infection of plants and plant products destined to other countries. The personnel of the Plant Protection Service are assisted in carrying out their activities by specialists in entomology and plant pathology of the National Institute of Agronomical Investigation (I.N.R.A.), as well as by officers of the Customs Service at maritime ports and airports where importations and exportations of agricultural products are carried out.

Problems of a plant quarantine nature are encountered especially in connection with forest products e.g., logs and timber offered for entry.

The quantity of agricultural products imported into Guadeloupe, French Guiana, and Martinique during 1969 amounted to 12,901.7 tons, 2,103 tons and 14,126 tons respectively. The amount exported to other countries (especially France, Italy, Belgium and to a lesser extent Caribbean countries) during this same period was 128,120 tons from Guadeloupe and 208,683 tons from Martinique. Guadeloupe issued 419 phytosanitary certificates and Martinique 1,857.

4. GUYANA

The Ministry of Agriculture is responsible for plant quarantine activities. Personnel consists of two plant quarantine officers, one of whom is stationed in Georgetown and is responsible for servicing the wharves, airport and post office, while the other is in the Central Agricultural Station, Mon Repos, and is especially concerned with supervising the fumigation of commodities for export. Ships are not boarded on arrival except those used for the exportation of rice bran. Plant products are inspected after unloading and either: (1) released; (2) treated and released; or (3) rejected and destroyed. No control is exercized at terrestrial ports of entry such as Lethen at the Brazil/Guyana frontier or at Springlands at the Surinam/Guayana frontier. Appointments are made for the inspection of arriving postal packages and plant products for exportation, as well as for the issuance of phytosanitary certificates. Data on pest interceptions are not maintained at present.

The need to improve plant quarantine facilities is recognized by the Ministry of Agriculture. A Plant Quarantine Section has recently been created under the Division of Entomology and staff recruited. Training of the staff was carried out during the first half of 1969 by Mr. A.L. Brown. The Plant Quarantine Section will also be responsible for internal plant quarantine.

5. JAMAICA

During the period 1968-69 plant quarantine services were maintained at the port of Kingston and at the airports in Kingston and Montego Bay. There were three full time inspectors at Kingston and one part time inspector at Montego Bay. These officers are assisted when necessary by other members of the Plant Protection Division of the Ministry of Agriculture.

Inspections of small consignments of fruits and other plant materials for export were done mainly at the headquarters at Hope. Large consignments were inspected at the points of packing in the country districts and in Kingston, and phytosanitary certificates provided. During 1968 and 1969, 458 and 1618 inspections respectively were carried out and certificates issued. These shipments consisted largely of: citrus fruits to the U.S.A., New Zealand and West Germany; yams, dasheens and plantains to England; and hybrid seed corn to various parts of the world.

The demand for plant quarantine services, however, was more for inspection of fruits, vegetables and other plant materials imported into the island or intercepted at the airports. During 1968 over 110,000 packages of fruits, vegetables, seed potatoes, cotton and other plant materials were inspected. In 1969 this increased to over 166,000 packages.

Imported fruits consisted mainly of apples, plums, pears and grapes from Canada, the U.S.A. and New Zealand. Imported plants and plant material consisted of large shipments of pineapple suckers from the Dominican Republic, rooted chrysanthemum and carnation cuttings from the U.S.A., and rose plants from England, the U.S.A. and Holland. Fairly large quantities of cotton lint were imported from U.S.A., Mexico and Colombia and coffee beans from Trinidad and Haiti. These were fumigated by local pest control operators using methyl bromide under tarpaulins.

A sizeable quantity of contraband plant material, mainly fruits and vegetables, was taken from passenger baggages at the Airports by Customs Officers and handed over to plant quarantine inspectors for destruction. In most cases their origin was not ascertained. Several packages of plants and plant materials not conforming to our Plant Quarantine Regulations were confiscated and destroyed.

At present there is not sufficient staff to provide a full time officer at the airports or the maritime port. Although no ship or plane inspections were conducted, this is proposed. CARIFTA countries are seeking entry of various fruits, vegetables and root crops now prohibited under our regulations and efforts are being made to amend our regulations to allow those that would not constitute much risk. This is, however, on condition that proper facilities for inspection and treatment are provided.

Facilities and equipment available at the ports of entry or points of inspection continue to be meager or completely absent in spite of much effort to correct this deficiency.

The Model Plant Quarantine Law drafted and approved by the Caribbean Plant Protection Commission was discussed and will be forwarded to the legal officers for consideration at an early date.

6. KINGDOM OF THE NETHERLANDS

A. Netherlands Antilles. The Director of Agriculture in the Netherlands Antilles is also the Head of the Plant Quarantine Division. Formerly, the Department of Public Health and the Veterinary Service performed import inspections. Export is practically nil but all exported material has to be inspected and accompanied by a phytosanitary certificate. These are mainly on quality and the presence or absence of diseases and pests. At the present time, the work is being coordinated via the Ministry of Agriculture. The first step was the printing of phytosanitary certificates.

B. Suriname. Enforcement of Plant Quarantine Laws and Regulations is carried out in the capital city of Paramaribo, as well as at the international airport of Zandery and the harbours of Nieuw Nickerie and Albina. The situation is more or less the same as described in the Report of the First Session of the Caribbean Plant Protection Commission. Fumigations facilities are being considered for the new harbour of Paramaribo. The cost of these facilities, including offices, are estimated at US$ 150,000.

Suggested changes in the present Plant Quarantine Legislation were recently submitted to Parliament. It is expected that the Pesticide Ordinance, which was submitted to the Parliament of Suriname a few years ago, will be approved soon. With regards to the occurrence of coffee rust (Hemileia vastatrix) in Brazil, and the production of coffee in Suriname, it can be stated that necessary steps were undertaken to prevent the introduction of this destructive disease into Suriname.

7. TRINIDAD and TOBAGO

The basic structure of the Plant Quarantine Service still consists of two inspection units, each with one senior inspector, two junior inspectors and six plant quarantine guards. Besides operating at the two principal ports, these units are also responsible for inspection activities at other ports and for the fruit fly trapping programme.

During the period 1968-70, considerable improvement in the performance of the Plant Quarantine Service operating on the Port of Spain wharves was noted following the appointment of a senior plant quarantine inspector who had recently completed a four month training period at the Unites States Plant Quarantine Division Training Center, New York. Plant quarantine guards attended the Regional Plant Quarantine Course arranged and conducted by the Caribbean Plant Protection Workshop at the University of the West Indies in 1970.

A small greenhouse divided into compartments and screened, will be used for post-entry plant quarantine work at the Central Experiment Station of the Ministry of Agriculture.

Plant material whose entry was refused included three large shipments of potatoes (two from the United Kingdom and one from Argentina) because of the presence of nematode infested soil, and several small shipments of apples, carrots, beans, garlic and other vegetables and fruit due to the presence of pests and diseases, or unsatisfactory certification.

8. UNITED KINGDOM

A. Dependent Territories and Associated States. The plant quarantine situation remains much the same as reported two years ago. Most of the islands were represented at the Regional Plant Quarantine Training Course in Trinidad. Unfortunately, due to lack of adequate staff, the officers that participated in the course have many other duties in addition to plant quarantine. There is also a complete lack of plant quarantine facilities and a staff of specialists (entomologists, plant pathologists) is not available. While much of the ship or schooner trade is strictly inter-island, many of the territories have direct aircraft connections with areas located outside of the Caribbean Region and the possibility of having foreign pests and diseases introduced does exist.

B. Antigua. The current plant protection legislation recognizes a Plant Protection Committee, which is a Committee of Management of the (then) Plant Quarantine Station established by Trinidad under a Plant Protection Ordenance of Trinidad and Tobago in 1940. Plant protection regulations are in effect to regulate and prohibit the importation of plant material. These are based upon the country of origin and the type of plant material concerned. Certain plants and plant materials such as coconut seedlings, copra and cotton products may be imported only under permit. All imported plant material must be accompanied by a phytosanitary certificate issued by the Department of Agriculture of the country of origin.

Agricultural Officers and Customs Officers are considered as Plant Protection Officers and the law provides for the inspection, treatment, destruction or detention of imported plant material. Any plant material imported in violation of the plant protection regulations is confiscated and destroyed. Although a great need exists, there are no facilities for holding plant material in quarantine or for the treatment of plant and plant products. No statistics are available concerning plant quarantine activities.

Plant material for export is inspected by an Agricultural Plant Protection Officer, using either a representative sample or the entire consignment. If found satisfactory a phytosanitary certificate is issued. If necessary, the material is fumigated.

Steiner fruit fly traps have been used to determine the presence or absence of the Mediterranean fruit fly. To date this species has not been found.

C. Grenada. The Chief Technical Officer (Extension) of the Ministry of Agriculture is responsible for the overall execution of the Government's policy on plant quarantine and related matters. The Plant Protection Officer is responsible for the day by day activities of the Plant Protection Division and the plant protection programme carried out by four Plant Disease Inspectors. In addition there are 53 paid employees engaged in plant protection activities.

Short courses in pest management at the Imperial College, England, sponsored by the Overseas Development Service, were attended by the Plant Protection Officer and one Plant Disease Inspector. Three other Plant Disease Inspectors attended courses at the Eastern Caribbean Farm Institute and the University of the West Indies, in Trinidad.

During the past two years, the Plant Protection Division was mainly concerned with programmes involving control of witches broom, cocoa beetle and the froghopper.

In connection with plant quarantine, no ships or aircraft were boarded, but it is hoped that with an increased staff and service reorganization, this can be done in the future. Inspection of imported fruits, vegetables and planting material was done when Customs held this material and the Division was advised. Plant Materials either confiscated or refused entry were burned or dipped in a formaldehyde solution and dumped into the sea, as approved facilities for the destruction of confiscated plant material are lacking. The inspection and certification of fruits, vegetables and plant propagating material offered for export were satisfactorily carried out.

The Government of Grenada has appointed a local committee to study and make recommendations and the draft "Model for a Plant Quarantine Law" circulated by the Commission's Technical Secretary.

Recommendations have been made to the Government to strengthen the service by staff increases and provision of better plant quarantine facilities at all ports. It is also considered necessary that the training of the staff at overseas institutions or by being attached to larger Plant Protection Departments in other countries be carried out on a continuing basis.

9. UNITED STATES OF AMERICA

A. The following summarizes plant quarantine activities during the fiscal year 1969. Thirteen million more people crossed the international borders of the United States than were recorded in the previous year, making an alltime high of 231 million travelers. By air, ship and automobile, or by walking across the Mexican border, they brought with them 75.5 million pieces of baggage and assorted packages subject to inspection at ports of entry. They helped to transport some 269,000 lots of prohibited plant material and the major part of the 41,000 pests intercepted during the year. To transport these travellers 296,000 airplanes, 62,000 ships and 38 million vehicles were utilized. In addition, over 68 million foreign mail packages were received, for which inspection was required. It is expected that the Plant Quarantine workload will continue to increase at the rate of 6 to 10 percent each year.

Cargo importations of plant material under permit increased by over 10,000 shipments, reversing the slight downward trend experienced during the previous three years, and air cargo shipments subject to plant quarantine inspection and clearance were up 29 percent over 1968. The latter reflects the constantly expanding volume of agricultural commodities shipped by air which has increased by over 70 percent in the last four years.

Export certification activities remained high and inspectors issued some 52,000 certificates covering over 51 million containers of products.

The continuing threat of foreign plant pest entry is reflected in the interception of 618,785 lots of unauthorized plant material in 1969 in contrast to 598,427 lots in 1968. There were also 41,279 pest interceptions made during the fiscal year under discussion. Some of the major interceptions (the number indicated after each species) were the Mediterranean fruit fly (265), oriental fruit fly (137), olive fruit fly (120), European cherry fruit fly (214), khapra beetle (443), citrus canker (420), golden nematode (45), sweet orange scab (285), Japanese citrus scale (687), black spot of citrus (778) and pink bollworm (10).

In view of increased air travel between Hawaii and the United States mainland, a major modification of inspection procedures has been initiated. Selective procedures as part of predeparture baggage inspection in Honolulu and Hilo, Hawaii are now being carried out. Under these procedures the Plant Quarantine Inspector works ahead of the airline representative and questions each departing passenger, examines his carry-on baggage to the extent he deems necessary and exercises his judgement with respect to the need to examine all baggage. Selective examination of this type will assist in meeting a constantly increasing workload within the framework of existing and projected staffing.

During 1969, the Plant Quarantine Division initiated a programme to provide agricultural quarantine inspection and clearance of returning military equipment and personnel at specified logistic areas in Viet-Nam. The programme was developed in cooperation with the Department of Defense, the U.S. Bureau of Customs, and the U.S. Public Health Service, using existing manpower resources. Specially trained military cooperators have been designated to carry out inspection activities under the supervision of the inspection agencies. These preclearance operations provide greater protection against the introduction of pests of agricultural and public health concern without creating a need for additional inspectional personnel at U.S. ports of entry.

The Division has increased its informational activities and exhibits, news releases, radio spot announcements, movie film leaders, publications for use by schools and garden clubs, and special television features were again used. As experience to date indicates that the full potential of the information programme cannot be achieved through voluntary cooperation, new legislation is being proposed to require that airlines and steamship companies give their passengers positive notification concerning agricultural quarantine restrictions.

B. Puerto Rico. The enforcement of U.S. plant quarantine laws and regulations at San Juan, Puerto Rico, as at other United States ports of entry, is designed to exclude foreign plant pests and diseases while imposing a minimum of inconvenience upon travelers, importers and exporters, operators of carriers and the general public. The basic tools

for effecting this programme of plant protection are (1) a system of permits to regulate the importation of host-plant materials, and (2) inspection of incoming ships, aircraft, baggage and cargo.

As long as most travel between Puerto Rico and the U.S. mainland was by ship, passenger and crew baggage created relatively few problems, as the inspection could be made at the mainland port of arrival by the same plant quarantine personnel responsible for foreign arrivals. With the coming of air travel, however, the picture changes.

Predeparture inspection has the decided advantage of ensuring detection of pests and of restricted or prohibited host materials at the point of origin. This reduces the possibility of accidental introduction and establishment on the mainland. It also offers better service to the travelling public and the airlines by providing all inspections while passengers are waiting for flights to depart, thus avoiding delays at destination.

Aside from the foreign and predeparture inspection conducted in San Juan, the port conducts inspections of domestic produce offered for export and issues phytosanitary certificates to meet the entry requirements of receiving countries. San Juan is designated as an inspection station for nursery stock and provides inspection and treatment of propagative material arriving from foreign sources. Mail inspection is a part of the overall responsibility of the unit, but changing postal procedures have made this activity less effective than it once was, and much of the Puerto Rican mail now must be inspected in Miami, Mobile, and New Orleans, U.S.A.

Ramey Air Force Base, in the northwest sector of Puerto Rico, is staffed by one Plant Quarantine Inspector. He works closely with two assigned Customs Inspectors and with military cooperators in the inspection of foreign-arriving aircraft, as well as those departing for the mainland. The Naval Air Station at Roosevelt Roads is also staffed by this Division in the same joint procedure with Customs.

The Commonwealth of Puerto Rico maintains a Plant Quarantine Section and Commonwealth inspectors are designated as federal plant quarantine inspectors without compensation. Commonwealth plant quarantine offices are maintained in Hato Rey, Fajardo, Mayaguez and Ponce.

The Inspector in Charge, San Juan, serves as a field assistant to the Supervisor of the Gulf Region, who is headquartered in New Orleans. He has overall supervision of his own port, is responsible for maintaining liaison with, and furnishing guidance to, the Commonwealth inspection force, and supervises, in a broad sense, the Inspectors in Charge at Ramey AFB, Roosevelt Roads Naval Air Station, and at St. Thomas and St. Croix, U.S. Virgin Islands. He also is authorized to issue import permits, including those requiring post-entry growing agreements. This function is centralized in the Permit Section, Plant Importations Branch, Hoboken, New Jersey, for all of the Division except San Juan and Honolulu.

10. REPORT BY THE FAO PLANT QUARANTINE OFFICE ASSIGNED TO THE REGION

As a result of the recommendations approved and the future work outlined at the First Session of the Commission in Paramaribo, extensive activities in plant quarantine occurred during the past two years.

In the field of training, basic plant quarantine courses on a national level were coordinated in the Dominican Republic with 57 students registered. On the international level, a basic course was held in Trinidad and Tobago (34 students) and a Seminar for Heads and Principal Assistants was conducted in cooperation with the USDA Plant Quarantine Division in Puerto Rico with 15 participants. In addition, lectures were presented to each new class of the Customs Regional Training School and the Eastern Caribbean Institute of Forestry and Agriculture. The Regional Plant Quarantine Expert also took part in the Plant Protection Workshop conducted by the University of the West Indies in July 1969.

Quarterly reports of activities in the Region were begun at the end of 1968 and the List of Major Insect Pests and Plant Diseases of Economic Crops in the Area has been distributed. A draft of the vegetable pest and disease list for the Region is now being circulated for correction. The list of Dangerous Insects and Diseases not yet Established in the Caribbean is presently being revised and brought up to date.

A Public Information Leaflet designed especially for use in the Caribbean Region is now in the final stages of printing. The first run of 50,000 copies will soon be available for distribution.

A model plant quarantine law has been prepared and was submitted to the delegates of the Second Session for their consideration. Model regulations to augment the basic law are now being drafted.

It is of interest to note that Jamaica has recently become a signatory of the International Plant Protection Convention. Barbados, Guyana, and Trinidad have also taken the necessary steps to initiate action for formal adherence to the Convention. This means that the Caribbean Plant Protection Commission will have a larger percentage of its membership signatory to the Convention than any other FAO sponsored Regional Plant Protection Organization.

There remain, however, many pressing problems in the Caribbean. Among these are:

1. The need for an associate expert to conduct surveys for insect pests and plant diseases.
2. Lack of enabling legislation in certain countries.
3. A need for the authorized boarding and inspection of arriving carriers.
4. The lack of post-entry plant quarantine facilities. As much propagating material enters the Region directly from high pest risk areas, the danger of introducing pests and diseases new to the region is ever present.

Another factor to be considered is the establishment of the Caribbean Free Trade Area whereby the interchange of certain fruits and vegetables is being encouraged. Certain items on the agricultural protocol present a definite pest risk to areas where adequate inspection and treatment facilities are not available.

V REVIEW OF INFORMATION ON PESTS AND DISEASES AFFECTING CROPS OF ECONOMIC IMPORTANCE TO THE CARIBBEAN REGION

1. Pests and diseases known to occur in the region

The Commission was informed that the list of pests and diseases of economic crops had been distributed to the member governments, and was enthusiastically received. Numerous requests from sources not on the regular mailing list had been received and were honoured. It was stressed that this list could be a much more valuable source of information if all contributors would once again carefully check the list and submit any corrections or additions required. The Technical Secretary indicated that any suggestions in connection with improving this document would be welcome.

The Commission was also informed that the draft list of major pests and diseases of vegetable crops was distributed on 6 February 1970 and as soon as the corrected copies are returned to the Technical Secretary, the second and final draft will be prepared. It was suggested that the section on pineapple pests be incorporated in the economic crop list.

2. Pests and diseases not known to occur or not widely distributed in the Region

The document "Destructive Pests and Diseases Not Yet Established in the Caribbean Region" which appeared as Appendix D in the report of the First Session of the Caribbean Plant Protection Commission, was revised and up-dated by the inclusion of new records of distribution for certain pests and diseases, as well as by the addition of new pest and disease species. This revised document is included as Appendix C.

VI CURRENT STATUS OF PLANT PESTS AND DISEASE CONTROL PROGRAMMES WITHIN THE REGION

1. Pest and disease control programme

In Guyana more effective and less costly pesticides have been selected to control the rice caterpillar and paddy bug, and low volume, drift spraying with motorized knapsack sprayers is being used to apply these pesticides. In 1969, about 25 000 acres were dusted with 0.5 percent BHC to control nymphs of Aeneolamia flavilatera, and about 5 000 acres were sprayed with malathion/trichlorphon for adult control. Larvae of Laphyma sp. and Mocis sp. were also present and over 3 000 acres were sprayed with trichlorphon/endrin to achieve control. A campaign against the acoushi ant was also carried out in 1969 and about 12 000 nests were destroyed using about 6 000 lbs of Mirex 450 bait. An additional 1 300 nests were destroyed using aldrin EC, and swingfog machines. Pest and disease surveys were carried out in connection with the paddy bug (Oebalus poecila) and the percent of resulting damage, white head of paddy and its cause, and the cause of high mortality of coconut palms in the 3 to 10 year old range.

During 1968 a serious outbreak of aerolate leaf-spot occurred on citrus throughout Trinidad. Good control was achieved with copper fungicides such as Kocide 101 and Cuprarit Blue. Leaf scald disease of sugarcane was identified in 1969 in a sugarcane nursery plot and all plants of the infected variety were destroyed immediately.

A subsequent survey failed to reveal any other areas of infection. Algal leaf spot, thread blight disease, American leaf disease, and Cercospora leaf-spot posed a threat to the 1969 coffee crop. Copper fungicides were recommended for their control. There were widespread locust swarms in South Trinidad in 1969 and well into 1970. Aerial spraying with chlorfane was fairly effective.

In Grenada during the period 1968/70, the Plant Protection Division was mainly concerned with control programmes against witches broom of cocoa, the cocoa beetle and the froghopper of sugarcane. Satisfactory control was achieved.

2. Pest and disease surveys

In Barbados surveys are usually only carried out at the time damage is reported. This work is carried out by the Extension workers and may result in a farmers' bulletin of a general nature. In the Dominican Republic pests and plant pathogens collected are identified in the identification laboratory at San Cristobal, sent to Texas A and M, U.S.A. for identification or sent to specialists in Puerto Rico. The services of local experts not with the government are also utilized. In Martinique, and this would include other French Territories in the Caribbean, in addition to survey programmes already in operation it is planned to initiate trapping programmes. Surveys were carried out in Guyana to determine the loss in quality of paddy due to Oebalus poecila, as well as to determine the cause and extent of white head of paddy. As there is high mortality of 3 to 10 year old coconut palms, surveys were carried out to determine the reasons for this. It was estimated that as a result of this high mortality only 40 percent of coconut yield potential is realized.

VII SPECIAL PLANT QUARANTINE PROBLEMS

1. Post-entry Plant Quarantine Station

The Commission noted the continuing and urgent needs of the member countries to import new or improved varieties and breeding stock of plants important to their agricultural economy and development, as well as the lack of post-entry plant quarantine facilities to screen such importations. The delegates of all governments represented at the Session recognized the need for the establishment of a post-entry plant quarantine station within the region and the observer from Antigua indicated he would investigate the possibility of having Antigua serve as the site for such a station. It was felt that the post-entry station should be established on a regional level and that the Commission's Technical Secretary should visit the concerned countries to determine the extent they may be able to participate in such a project. A recommendation in connection with the establishment of a regional post-entry plant quarantine station with assistance from the United Nations Development Programme and FAO was approved.

2. Legislation

The model Plant Quarantine Laws as prepared by the Technical Secretary in consultation with the Executive Committee was reviewed and approved by the Commission (see Appendix B.) A recommendation dealing with plant quarantine legislation and regulations was also approved.

3. Phytosanitary Certificates

The attention of the Commission was called to the lack of uniformity in size of phytosanitary certificates in use by the plant quarantine services of the Commission member countries and that at least one of the Governments does not use a certificate that conforms to the model annexed to the International Plant Protection Convention. Consequently a recommendation seeking to correct these deficiencies was approved.

4. Containerization

The Commission reviewed the paper on "The Use of Containers in Commercial Shipping and its Phytosanitary Implications". It concluded that as the advent of containerization has brought with it problems peculiar to plant quarantine, it is an obligation of the plant quarantine authorities to attempt to resolve the resulting problems with phytosanitary implications. Whether this is to be done in collaboration with shipping companies, exporters/importers, national plant protection services, or otherwise, will depend upon the specific problem. In any case, due to the use of containers on a worldwide level, collaboration on an international level will be a necessity and the adherence of governments to international plant protection organizations as well as to the International Plant Protection Convention will greatly facilitate this collaboration.

VIII INTERGOVERNMENTAL COOPERATION

The importance of regional and international cooperation in the organization and operation of national plant quarantine services, submission of reports concerning pest and disease outbreaks and new introductions, and exchange of information in connection with plant quarantine activities was recognized by the Commission. Recent developments in the transport of plants and plant products have made mandatory this cooperation on a global scale. It was felt that as regards providing information to the Commission, the concerned governments should designate someone to be responsible on a permanent basis.

The Commission noted with gratification the number of member governments which are signatory to and have ratified the International Plant Protection Convention or which have adhered to the Convention. At the time the Report of the Second Session was in preparation these governments included: Dominican Republic, France, Guyana, Haiti, Jamaica, Netherlands, Trinidad and Tobago and the United Kingdom.

IX INTERNATIONAL PLANT PROTECTION CONVENTION

The Commission was informed that during the Fifteenth Session of the FAO Conference in November 1969, the need to re-examine the provisions of the International Plant Protection Convention was considered and the Canadian delegate proposed that his Government would provide FAO with an expert to assist in the preliminary work. In connection with this, the decisions of the Conference as they appear on page 77, paragraph 414 of the Conference Report were as follows:

"Recognizing that much experience had been gained in the implementation and application of the International Plant Protection Convention which was approved in 1951, the Conference considered it desirable to re-examine the provisions of the Convention, especially in connexion with the model phytosanitary certificate. To this end, the Conference expressed appreciation of the offer made by the delegation of Canada to make available the services of a short-term quarantine expert to assist FAO in the work."

To this end it was felt that the views of the regional plant protection organizations and certain governments should be first obtained, especially with regard to the following points:

1. Is there any provision of this Convention which requires re-consideration or modification.

2. Is there any problem of quarantine importance which should be included in the Convention.

3. The applicability of the model phytosanitary certificate to plant products of various kinds, including those not destined for propagation and growing.

4. The desirability of introducing other phytosanitary certificate forms to meet various requirements.

Consequently, letters were sent to the Organismo Internacional Regional de Sanidad Agropecuaria (OIRSA), Comité Interamericano de Protección Agrícola (CIPA), Inter-African Phytosanitary Commission, European Plant Protection Organization (EPPO) and to the Chairmen of the Caribbean Plant Protection Commission, Near East Plant Protection Commission and the Plant Protection Committee for the Southeast Asia and Pacific Region, as well as to certain governments requesting their views on the above points. The replies received were reviewed by the FAO Secretariat in collaboration with the Canadian expert. Should any amendments to the International Plant Protection Convention be proposed, the action taken would be in conformity with Article XIII of the Convention.

X. TRAINING IN PLANT QUARANTINE

The Commission recognized the desirability of a comprehensive approach to the plant quarantine training needs of the region and felt that training courses should be presented at three levels e.g., elementary, intermediate and advanced. It was further felt that significant improvements in the efficiency of regional plant quarantine services could be achieved by the introduction of regular, on-the-job training of inspectors by senior inspectors, specialist entomologists and plant pathologists and that local programmes should be initiated where this type of personnel is available. It was also recommended that where such personnel is not available, special intergovernmental arrangements be made through the Caribbean Plant Protection Commission for experts in the region to be used on special projects.

It was determined that the Caribbean Plant Protection Commission actively seek sources for financing the afore-mentioned training. The Commission noted with gratification the statement by the United Kingdom observer, that his Government was prepared to consider aid to cover passage and subsistence to enable students from the

Associated States and Dependent Territories to attend courses held at a regional level. It was also noted that the Government of the United Kingdom was prepared to consider assisting in training at the post-graduate level and was especially concerned with supporting training for plant quarantine personnel. It was agreed that national and international organizations such as USAID and FAO be approached to determine what other assistance may be available. A recommendation dealing specifically with training was approved.

XI. INFORMATION PROGRAMMES

A model leaflet designed to solicit public cooperation to prevent the introduction of new plant pests and diseases was prepared and distributed by the U.S.A. Commission representative for approval by the Executive Committee. Certain changes were suggested and the revised model was then approved by the Committee. This information leaflet which is worded in English, French, Spanish and Dutch should be available for distribution soon.

XII. IN MEMORIAM

In memory of Mr. G. Grivas, a delegate of the Government of France to the First Session of the Caribbean Plant Protection Commission and whose death was mourned by all present, a minute of silence was observed at the last business session of the Commission. Mr. Grivaz was the former Director, Agriculture and Forestry Service, Cayenne, French Guiana.

XIII. CLOSING OF THE SESSION

At the conclusion of the Session, Dr. Raúl Barrientos F., Subsecretario de Estado de Recursos Naturales, Secretaría de Estado de Agricultura, spoke to the delegates, at which time he expressed his gratification for the success achieved by the participants of the Commission's Second Session and his hopes that the territories located within the Region would benefit as a result of the Commission's activities. The Chairman, Ing. Nelson Gonzalez, expressed his gratitude to the delegates and observers for their cooperation and to the FAO Secretariat for its assistance in making the Second Session an unqualified success. The delegates then expressed their pleasure at the progress achieved by the Commission during the course of the Session and their appreciation for the facilities provided them by the Government of the Dominican Republic. Mr. A.L. Brown, the Commission's Technical Secretary, also expressed his pleasure for the delegates' contribution to the Session.

Finally, Mr. G.H. Berg, FAO Agricultural Officer (Plant Quarantine), Rome, on behalf of FAO thanked the Government of the Dominican Republic for serving as host country and providing the excellent facilities and services that so greatly contributed to the success of the Session.

XIV. RECOMMENDATIONS

1. THE COMMISSION,

Noting the continuing and urgent need of the member countries of the Commission to import new varieties and breeding stock of plants important to their agricultural economy and development including banana, coffee, rice, sugarcane, citrus and cocoa;

Recognizing that this could result in the introduction and establishment of agricultural pests and diseases not readily detectable at the time of importation;

Aware of the lack of approved facilities for post-entry detention and observation within the Region;

Convinced of the benefit resulting from the establishment of approved post-entry plant quarantine facilities for the further development of the Region's agricultural programmes;

Recommends that:

a. Consideration be given to the establishment of a regional Post-entry Plant Quarantine Station and Training Centre with at least three governments participating and which can be utilized by all territories within the region;

b. FAO assist the concerned governments in determining the most appropriate site for the proposed Post-entry Plant Quarantine Station and Training Centre as well as in the preparation of a draft request for assistance from the United Nations Development Programme (SF) for the establishment of these facilities.

2. THE COMMISSION,

Recognizing the need for adequate treatment facilities for agricultural exports and imports within the region;

Noting the lack of adequate facilities available to carry out such services;

Convinced that the availability of these services would stimulate freer trade and commerce;

Recommends that:

a. The member governments take the necessary measures to establish adequate and approved plant quarantine facilities (fumigation, hot water, dry heat etc.), where required;

b. They also establish as soon as possible the minimum treatment requirements necessary to prevent the introduction of new and injurious plant pests.

3. THE COMMISSION,

Noting the diversity of regulations within the Region affecting the entry and export of plants and plant products;

Recognizing the value of plant quarantine regulations based on sound biological factors which will permit the maximum interchange of commerce with a minimum of pest risk.

Recommends that member governments within the Region take all necessary action to amend and/or enact plant quarantine legislation and regulations taking into account the model Plant Quarantine Law approved by the Commission at its Second Session.

4. THE COMMISSION,

Recognizing the need for a comprehensive approach to plant quarantine training within the Region to adequately train personnel responsible for protecting the agricultural resources of the Region;

Being aware of the need to include appropriate training at various levels;

Noting that the existing training facilities and capacities should be expanded;

Recommends that the member governments take immediate steps to establish and participate in on-the-job and technical training programmes, such programmes to include elementary, intermediate and advanced levels of training and that they take full advantage of all assistance available to the Region.

5. THE COMMISSION,

Noting the United Kingdom has informed FAO that it does not wish to retain full membership in the Caribbean Plant Protection Commission and that in the future it be invited instead in an observer capacity to the Sessions;

Recognizing the importance of cooperation by the Dependent Territories and Associated States with other territories within the Region;

Aware that observer status for the United Kingdom participants reduces their effective participation at Commission Sessions;

Recommends that:

a. The Director-General of FAO call the attention of the United Kingdom to the importance of retaining full membership in the Commission, as full participation by this Government, the Dependent Territories and the Associated States is essential for the protection of the agricultural resources within the Region;

b. Ways and means be found to enable the Associated States to attend the Sessions with full delegate status.

6. THE COMMISSION,

Noting the lack of uniformity in size of the phytosanitary certificates currently in use by the plant quarantine services of the Commission member governments and that at least one of the governments does not use a certificate that conforms to the model annexed to the International Plant Protection Convention;

Recommends that:

a. A phytosanitary certificate that is uniform in size and that conforms to the model annexed to the International Plant Convention be used by all territories within the Region;

b. The concerned governments include the "no liability clause" on the certificate as has already been done by some of them.

7. THE COMMISSION,

Noting the necessity of continuation in the Executive Committee;

Recognizing the importance of having Parliamentary procedures followed in this Commission;

Recommends that:

a. The executive committee be composed of five members, one of whom shall be the outgoing chairman of the preceding committee;

b. This be referred to the FAO Director-General for approval and subsequent confirmation by the FAO Council.

8. THE COMMISSION,

Recognizing that in dealing with the public and other government agencies, a uniform and a badge are symbols of authority and as such can be instrumental in aiding the plant quarantine inspector in the discharge of his official duties;

Recommends that:

a. The member governments of the Commission provide their plant quarantine inspectors with uniforms, badges and identification cards as soon as possible, if this has not already been done;

b. The Technical Secretary assist the member governments in setting up guidelines in determining the type of uniform and badge to be used.

APPENDIX A

AGENDA

1. Opening of the Session
2. Election of Chairman and Vice-Chairman
3. Adoption of Agenda
4. Election of Members of the Executive Committee
5. Designation of Drafting Committee
6. Designation of Committees Concerning Post-Entry Plant Quarantine, Training and Fumigation
7. Status of Commission (Report by FAO)
8. Review of Plant Quarantine Activities in the Region
9. The Commission and its Work during 1968-70
10. Review of Information on Pests and Diseases of Economically Important Crops:
    (a) Those known to occur in the Region
    (b) Those not known to occur or of limited distribution
11. Current Status of Plant Pest and Disease Control Programmes within the Region
12. Pest and Disease Surveys and Reporting Services
13. Special Plant Quarantine Problems:
    (a) Post-entry Station
    (b) Legislation
    (c) Phytosanitary Certificates
    (d) Containerization
14. Intergovernmental Cooperation
15. International Plant Protection Convention
16. Training in Plant Quarantine
17. Other Business
18. Adoption of Recommendations

APPENDIX B

A Model for a Plant Quarantine Law

In order to protect the agricultural resources of _____ from dangerous insect pests and plant diseases, the following is enacted by the _____ of _____.

Definitions

Section I. For the purposes of this act, the definitions of the following terms shall apply: Fruits and Vegetables include all edible portions of food plants in the raw or unprocessed state. Planting Material includes trees, shrubs, vines, cuttings, grafts, scions, buds, bulbs, roots, seeds; and any other plant part capable of propagation. Plant Pest means any living stage of any insect, mite, nematode, slug, snail, protozoa or other invertebrate or vertebrate animal, bacterium, fungus, parasitic plant or reproductive part thereof, viruses, or any organism similar or allied with any of the foregoing plant product capable of causing damage to any plant or plant product. Plant Product means any substance, material or article of vegetable origin, including pollen, either processed or unprocessed, which is capable of transporting plant pests or diseases. Soil is defined as the loose surface material of the earth in which plants grow, in most cases consisting of disintegrated rock with an admixture of organic material and soluble salts. Person as used in the context of this act shall be construed to mean both the singular and plural, as the case demands, and shall include corporations, companies, societies or any group of persons acting as a single entity.

Limiting Power

Section II. Whenever the Minister of Agriculture shall determine that the unrestricted importation into or movement within _____ of any plants, fruits, vegetables, roots, bulbs, seeds or other planting material, plant pests, soil or plant products as defined in Section I or any other non-plant article may result in the entry or movement of dangerous plant pests, he is authorized and directed to prohibit or otherwise restrict the importation or movement of such plants, fruits, vegetables, roots, bulbs, seeds or other plant or non-plant products to protect the agricultural resources of _____.

Promulgation of Regulations

Section III. The Minister of Agriculture shall make and promulgate such rules and regulations as may be necessary for carrying out the provisions of this act.

Enforcement Authority

Section IV. That any designated employee of the Ministry of Agriculture, or anyone so authorized by the Minister of Agriculture to enforce the provisions of this act and furnished with suitable identification, who has cause to believe that any person, receptacle or carrier coming into or moving within _____ possesses, contains or carries any fruits and vegetables, plant pests, plant products, planting material, soil or non-plant articles that constitute a risk to the agriculture of _____, the entry of which is prohibited or restricted by the provisions of this act or regulations issued pursuant thereto, shall have the power to stop, and without warrant, inspect, search and examine such persons, receptacles or carriers and seize, destroy or otherwise dispose of such fruits and vegetables, plant pests, plant products, planting material, soil or other articles brought into or moved within _____ in violation of this act.

Mail

Section V. Products or articles named in Section IV moving in the mail shall be subject to regulations administered jointly by the Postal Service and Plant Quarantine Service.

Official Shipments

Section VI. Material imported by the Ministry of Agriculture for experimental purposes shall be imported under such conditions and regulations as specified by the Minister of Agriculture.

Permit Requirements

Section VII. It shall be unlawful to import or offer for entry into _____any fruits, vegetables, plant material, plant pests, certain plant products or soil unless or until a permit, issued under such conditions or regulation specified by the Minister of Agriculture has been acquired. The Minister of Agriculture shall issue such permits when the conditions as prescribed in this act and the regulations issued pursuant thereto have been or will be complied with.

Certification Requirements

Section VIII. Planting material, except seeds of annual flowers and vegetables or field crops for consumption purposes imported into _____ must be accompanied by a phytosanitary certificate issued by the appropriate foreign governmental agency on the model adopted by the International Plant Protection Convention in 1951, or as amended.

Post-entry Quarantine

Section IX. The Minister of Agriculture is authorized to limit the importation of fruits and vegetables, plant pests, planting material, plant products and soil from foreign sources under such rules and regulations as he deems necessary including the requirement that planting material be grown in detention by or under the supervision of the Ministry of Agriculture of _____, and, if found infested or infected with dangerous plant pests or diseases, to prescribe such remedial measures as necessary to prevent the spread thereof.

Arrival Notification

Section X. It shall be the duty of the Minister of Finance, through the Customs Service, to promptly notify the Minister of Agriculture of the arrival of any fruits and vegetables, plant products, planting material, plant pests, soil or other articles regulated by this act, at the port of arrival and, further, to hold such material in the custody of Customs until released by the Minister of Agriculture.

Safeguards

Section XI. Articles which are prohibited or restricted entry for importation by the provisions of this act or regulations issued pursuant thereto, if temporarily in the country or territorial waters of _____ are subject to such regulations as may be deemed necessary by the Minister of Agriculture to carry out the purposes of this act. This also applies to carriers including ships and aircraft, their stores, furnishings, etc., while the carriers are temporarily in the territory of _____.

Export Certification

Section XII. The Minister of Agriculture is authorized to promulgate such rules and regulations and use such means as he deems necessary to provide for the inspection of domestic plants and plant products offered for export and to certify to shippers and interested parties as to the freedom of such products from injurious plant pests according to the phytosanitary requirements indicated on the model certificate adopted by the International Plant Protection Convention 1951, or as amended.

Exclusion of Liability

Section XIII. No liability may be attached to the government of _____ for the destruction of material brought into _____ in violation of the Plant Quarantine Act or the regulations issued pursuant thereto. Likewise, the government is in no way liable for any damage done, or delays incurred by treatments or other quarantine action deemed necessary and performed under the existing rules and regulations. All such treatments are performed at the sole risk of the importer.

Penalties

Section XIV. Any person who shall violate any provision of this act or who shall alter, forge, counterfeit, deface or destroy any certificate provided for in this act shall be deemed guilty of _____ and shall, upon conviction thereof be punished by a fine not exceeding _____ and/or by imprisonment not exceeding _____. Provided further, that any person who, in any manner, obstructs or impedes, commits an assault upon or causes bodily harm to any duly authorized employee of the Ministry of Agriculture in the execution of any of the powers conferred by this act shall be deemed guilty of _____ and, upon conviction thereof, shall be punished by a fine not exceeding _____ and /or imprisonment not exceeding _____.

Section XV. This act supersedes _____ and shall become effective on _____.

APPENDIX C

DESTRUCTIVE PESTS AND DISEASES NOT KNOWN TO OCCUR OR OF LIMITED DISTRIBUTION IN THE CARIBBEAN REGION

PEST	KNOWN DISTRIBUTION
Avocado (*Persea americana* Mill)	
Anastrepha ludens (Loew)	Central & South America, Mexico, U.S.A. (Texas)
Ceratitis capitata (Wied.)	Africa, Asia Minor, Mediterranean Region, Central Europe, Azores, Canary Islands, Madeira, Central America (Costa Rica, Nicaragua, Panama), South America, Hawaii, West Australia, Mauritius
Conotrachelus aguacatae Barber	Mexico, Nicaragua
Conotrachelus perseae Barber	Mexico, Guatemala, Honduras, Costa Rica, Panama
Heilipus lauri Boh.	Mexico, Guatemala, Costa Rica, Colombia
Heilipus pittieri Barber	Costa Rica, Nicaragua, Colombia?
Stenoma catenifer Wlsn.	Central & South America, Mexico, Ceylon, Hawaii
Xyleborus immaturus Blackburn	Hawaii
Xyleborus neivai Eggers	Brazil
Avocado sun blotch virus	Palestine, Peru, U.S.A. (California)
Banana (*Musa sapientum* (L.) Kuntze	
Achatina fulica Bowdich	East Africa, Malagasy Republic, India, Ceylon, Indonesia, Burma, Malaya, Philippines, Taiwan, Japan, Thailand, Vietnam, U.S.A. (Hawaii, Florida)
Amblypelta lutescens Dist.	Australia
Colaspis hypochlora L.	Mexico, Guatemala, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Guyana, Surinam, Trinidad & Tobago

PEST	KNOWN DISTRIBUTION
Lamprosema octasema Meyr.	Australia (Queensland), Fiji, Indonesia, New Caledonia, New Guinea, Samoa, Solomon Islands, Tonga
Odoiporus longicollis Oliv.	Burma, Ceylon, China, India, Java, Pakistan, Thailand
Scirtothrips signipennis Bagn.	Brazil, Trinidad & Tobago, Costa Rica, Honduras, Panama, U.S.A. (Florida), Australia (Queensland), Ceylon, Fiji
Tiracola plagiata Wlk.	Australia, New Zealand
Banana bunchy top virus	Congo, U.A.R., Asia (Ceylon, India, Pakistan, Okinawa?), Philippine Islands, Formosa, Malaysia, New Guinea, South Vietnam, New Caledonia, Bonin Islands, Ellice Islands, Wallis Island, Tonga, Samoa, Sabah, Hong Kong, Australia, Fiji, U.S. Trust Territory
Mycosphaerella musicola Leach (Black leafstreak strain)	Fiji, Samoa, Tonga, New Caledonia, Tahiti, New Britain, Solomon Islands, Papua-New Guinea, Hawaii, Indonesia
Pseudomonas solanacearum E.F. Smith (Moko disease strain)	Africa (Somalia?, Sierra Leone, Libya), Americas (Trinidad & Tobago, Honduras, Costa Rica, El Salvador, Guatemala, Nicaragua, Guyana, Colombia, Venezuela, Paraguay?, Argentina, Peru), Ceylon?, India, Malaysia, Philippines
Citrus (Citrus spp.)	
Anastrepha ludens (Loew)	Central & South America, Mexico, U.S.A. (Texas)
Ceratitis capitata (Wied)	Africa, Asia Minor, Mediterranean Region, Central Europe, Azores, Canary Islands, Madeira, Central America, (Costa Rica, Nicaragua, Panama), South America, Hawaii West Australia, Mauritius
Ceratitis rosa (Karsch)	Africa

PEST	KNOWN DISTRIBUTION
Cryptoblabes gnidiella (Mill.)	Europe, Mediterranean Region, Bermuda, New Zealand
Cryptophlebia leucotreta Meyr.	Africa
Dacus dorsalis (Hend.)	Iran, South-East Asia, Bonin Islands, Hawaii, Mariana Islands, Papua-New Guinea
Dacus tryoni (Hend.)	Australia, Papua-New Guinea
Diaphorina citri (Kuw.)	Mauritius, Brazil, Malaysia, Burma, Ceylon, China, India, Indonesia, E. & W. Pakistan, Hong Kong, Nepal, Philippines, Reunion
Ephestia vapidella Mann.	Israel, U.A.R.
Eutetranychus orientalis (Klein)	Aden, Afghanistan, Cyprus, U.A.R., Ethiopia, Iran, Israel, Jordan, Libya, Sudan
Phyllocnistis citrella Staint	Afghanistan, Iran, Iraq, Pakistan, Saudi Arabia, Tropical Asia
Prays citri Mill.	India, Israel, Syria, Mediterranean Region, Southern Europe
Prays endocarpa Meyr.	Middle and Far East
Toxoptera citricidus (Kirk)	Africa, East Asia, South America
Trioza erytreae (Del.G.)	Cameroon, Congo, Eritrea, Ethiopia, Kenya, Madagscar, Malawi, Mauritius, Rhodesia, Rwanda, St. Helena, Sudan, South Africa, Tanzania, Uganda, Zambia
Unaspis yanonensis (Kuw.)	Asia, Australia
Citrus greening virus disease	Southern part of Africa, Philippines, India, St. Helena, Mauritius, La Reunion
Deuterophoma tracheiphila Petri	Mediterranean Region (Aegean Islands, Algeria, Crete, Cyprus, Greece, Italy. Lebanon, Palestine, Sardinia, Sicily), Tunisia, Turkey, Uganda, Syria, USSR., Colombia?
Elsinoe australis Bitane & Jenkins	Sicily, Argentina, Bolivia, Brazil, Paraguay, Uruguay, New Caledonia
Guignardia citricarpa Kiely	Africa, Argentina, Brazil, Peru, Asia, USSR, Australia and Pacific Islands

PEST	KNOWN DISTRIBUTION
Sphaceloma fawcettii var. scabiosa (McAlpin & Tryon) Jenkins	Argentina, Australia, Ceylon, New Caledonia, New Guinea, Rhodesia
Xanthomonas citri (Hasse) Dowson	Africa (Congo, Ivory Coast, Mauritius, Rodriguez Island, Seychelles), Argentina, Asia, Caroline Islands, Guam, Fiji, Mariana Islands, Australian New Guinea, New Zealand
Cancrosis "B" strain	Argentina, Brazil, Paraguay, Uruguay
Cocoa (Theobroma cacao L.)	
Achatina fulica Bowdich	E. Africa, Malagasy Republic, India, Ceylon, Indonesia, Burma, Malaya, Philippines, Taiwan, Japan, Thailand, Vietnam, U.S.A (Hawaii, Florida)
Acrocercops cramerella Sn.	West Africa, Indonesia, Philippines
Apogonia cribricollis Burm.	Malaysia
Bryocoropsis laticollis Schum.	Ghana, Ivory Coast, Congo
Characoma strictograpta Hamps.	West Africa, Indonesia
Distantiella theobroma (Dist.)	Cameroon, Ghana, Ivory Coast, Nigeria
Helopeltis spp.	Africa, Ceylon, Indonesia
Mallodon downesi Hope	Ghana
Monalonion spp.	Central and South America
Mussidia nigrivenella Rag.	West Africa
Pantorhytes plutus (Oberth)	New Guinea
Pseudococcus njalensis Laing	West Africa
Sahlbergella singularis Hagl.	Africa (Sierra Leone to the Congo)
Cacao swollen shoot virus	West Africa, Ceylon
Monilia roreri Cif.	Colombia, Ecuador, Peru, Venezuela, Panama

PEST	KNOWN DISTRIBUTION
Coconut (*Cocos nucifera* L.)	
Aleurodicus destructor Quaint	South-East Asia, Philippines, Malaysia
Amblypelta cocophaga China	Solomon Islands, New Guinea
Amblypelta lutescens Dist.	Australia, New Guinea
Artona catoxanthe Hamps.	Indonesia, Malaysia, Philippines
Brontispa longissima Gestro	Malagasy Republic, Solomon Islands, New Guinea, Indonesia, New Hebrides, New Caledonia, Tahiti, Seychelles
Castnia daedalus Cramer	South America, Panama
Castnia licus Drury	Central and South America, Trinidad and Tobago
Melittomma insulare Fair	Seychelles, Malagasy Republic
Narosa conspersa Walk.	Southeast Asia
Nephantis serinopa Meyr.	Burma, Ceylon, India
Oryctes rhinoceros (L.)	East Asia, South Pacific Region, Mauritius, West Pakistan
Plesispa reichei Chap.	Indonesia, Malaysia
Promecotheca coeruleipennis Blanchard	Fiji, Hawaii, Samoa, Tahiti, Tonga
Rhynchophorus ferrugineus Ol.	Asia mainland, Australia, Philippines, Borneo
Cadang-cadang disease	Philippines
Coffee (*Coffea* spp.)	
Anthores leuconotus Pasc.	Central and South East Africa
Bixadus sierricola White	Angola, Belgian Congo, Cameroon, Dahomey, Fr. Guinea, Fr. Equatorial Africa, Gabon, Gambia, Ivory Coast, Nigeria, Port Guinea, Sierra Leone, Uganda
Diarthrothrips coffeae Williams	Africa
Dichocrocis crocodora Meyr.	Congo
Epicampoptera marantica Tams.	Ivory Coast, Guinea, Congo, Uganda

PEST	KNOWN DISTRIBUTION
Hypothenemus hampei Ferr.	Africa, Brazil, Surinam, Colombia, Peru, Ceylon, Indonesia, Malaysia, Thailand, Philippines
Leucoptera coffeina Washb.	Africa
Oligonychus coffeae Nietn.	East Africa, Southeast Asia
Scotia segetum Schiff	Africa, Europe, Indonesia, Ceylon, India
Trirhithrum inscripta Graham	Congo, East Africa
Coffee ringspot virus	Philippines
Coffee oil spot virus	Brazil
Colletetrichum coffeanum var. virulans	East Africa
Gibberella xylarioides Heim & Saccas	Africa, El Salvador?
Hemileia coffeicola Maubl. & Roger	Africa
Hemileia vastatrix B. & B.	Africa, Brazil, Asia, Pacific Islands
Cotton (Gossypium spp.)	
Anthonomus grandis Boh.	South Africa, U.S.A., Mexico, Guatemala, Costa Rica, Cuba, Dominican Republic, Haiti
Anthonomus vestitus Boh.	Peru
Apion soleatum Wagn.	East Africa
Bemesia tabaci Genn.	Africa, El Salvador, India
Conotrachelus denieri Hustache	Argentina, Paraguay
Crocidosema plebeina Zell	Cyprus, U.A.R., Iran, Italy, Sudan, Turkey, U.S.S.R., Puerto Rico, Dominican Republic?, U.S.A. (Florida), Australia
Cryptophlebia leucotreta Meyr.	Africa
Diparopsis castanea Hmps.	Africa
Dysdercus cingulatus (Fab.)	Asia, Australia, Pacific Islands
Dysdercus fasciatus Sign.	Africa
Dysdercus peruvianus Guerin	Brazil, Colombia, Peru, Venezuela

PEST	KNOWN DISTRIBUTION
Earias insulana (Bdv.)	Africa, Europe, Near East, Southeast Asia, India
Empoasca lybica (Bergevin)	Africa, Israel, Spain
Gargaphia torresi CostaLima	Argentina, Brazil
Gasterocercodes gossypii Pierce	Brazil, Peru
Horcias nobilellus (Berg)	Argentina, Brazil
Pectinophora scutigera (Holdaway)	Australia, Mariana Islands
Platyedra vilella Zell	Asia Minor, Iran, Iraq, Europe, Eastern U.S.A.
Sacadodes pyralis Dyar	Colombia, Guyana, Venezuela, Trinidad and Tobago, Panama
Spodoptera litura (F.)	Asia, Australia, Pacific Islands (except Hawaii)
Spodoptera littoralis (Boisd.)	Mediterranean Region, Near East, Africa
Abutilon mosaic virus	Austria, Netherlands, U.S.S.R., Brazil
Cotton curliness (leaf roll) virus	U.S.S.R. (Siberia)
Cotton leaf curl virus	Sudan, U.A.R., Philippines
Cotton small leaf virus	India
Cotton veinal mosaic virus	South America
Phymatotrichum omnivorum (Shear) Dug.	Argentina, Mexico, U.S.A.

FOREST TREES

Especially Blue Mahoe, Caribbean Pine, Eucalyptus, Mahogany, Teak

Diprion pallidus Klug.	Europe
Gonipterus scutellatus (Gyll.)	S. Africa, Australia
Heterobostrychus aequalis (Waterhouse)	Malagasy Republic, U.S.A.(Florida), Indochina, Indonesia, Thailand, India, Ceylon, Malaysia, Papua-New Guinea, Philippines
Heterobostrychus brunneus (Murray)	Africa south of the Sahara, Cape Verde and Seychelles Islands

PEST	KNOWN DISTRIBUTION
Lyctus africanus Lesne	Great Britain, Sudan, Middle and Far East
Melolontha melolontha (L.)	Europe, U.S.S.R.
Minthea rugicollis (Wlk.)	Great Britain, Brazil, Colombia, Middle and Southeast Asia
Sinoxylon anale Lesne	Asia, Indonesia, Philippines, Australia, New Zealand
Sinoxylon conigerum Gerst.	Great Britain, Middle and Southeast Asia, Hawaii
Stephanopachys quadricollis (Marseul)	Portugal
Xyloperthodes nitidipennis (Murray)	Ghana
Pseudomonas tectonae Roldan & Andres	Philippines

GRASSES

Agriotes lineatus (L.)	Europe to Siberia, Canada
Agriotes obscurus (L.)	Europe to Siberia, Canada
Sogata furcifera (Horv.)	Guyana, Surinam, Japan, Formosa, Fiji
Tipula oleracea L.	Great Britain, Europe, Mediterranean Area
Pangola stunt virus	Bolivia?, Brazil?, Guyana, Peru, Surinam, Malaysia, Fiji

Maize (Zea mays)

Busseola fusca Fuller	Africa
Chilo partellus Swinh.	East Africa, India, Pakistan, Thailand
Dichocrocis punctiferalis Guen.	Australia, Burma, Ceylon, China, India, Japan
Ostrinia nubilalis (Hbn.)	Africa, Asia Minor, Europe, U.S.A., India, Indonesia
Sesamia cretica (Led.)	Mediterranean Region
Sesamia inferens (Walk.)	Asia, Hawaii
Sesamia uniformis Dudgn.	Asia, Philippines

Sclerospora maydis (Rac.) Butl.	Belgian Congo, Israel, Argentina, India
Sclerospora philippinensis Weston	South Africa, Celebes, India, Philippines
Sclerospora sorghi Weston & Uppal	Africa, U.S.A., China, India, E. Pakistan, Philippines
Sclerospora spontanea Weston	Philippines

Mango (Mangifera indica L.)

Anastrepha fraterculus (Wied.)	Central and South America, Trinidad and Tobago, U.S.A. (Texas)
Anastrepha serpentina (Wied.)	Central and South America, Trinidad and Tobago, U.S.A. (Texas)
Apsylla cistellata Buckton	India
Cryptorrhynchus gravis F.	India
Cryptorrhynchus mangiferae (F.)	South Africa, Malagasy Republic, Hawaii, India, Indonesia
Dacus cucurbitae Coq.	Kenya, Southeast Asia, Hawaiian and Mariana Islands
Dacus dorsalis (Hend.)	Bonin, Hawaiian and Mariana Islands, Southeast Asia
Dacus tryoni (Frogg.)	Australia, Papua-New Guinea
Dacus zonatus (Saund.)	Amboina, Burma, Ceylon, India, Indonesia, Mauritius
Drosicha stebbingii Stebb.	India, Pakistan
Idiocerus clypealis Leth.	India, Philippines
Scirtothrips mangiferae Pr.	Africa

Oil Palm (Elaeis guineensis Jacq.)

Himatidium neivai Bond	Brazil, Surinam
Pachymerus nucleorum F.	Brazil, Paraguay, French Guiana
Marasmius palmivorus	Malaysia

Pineapple (Ananas sativus)

Holopothrips ananasi DaCosta Lima	South America
Rhinotermes intermedius Br.	Australia

PEST	KNOWN DISTRIBUTION
Thecla basiliodes Geyer	South America, Mexico, Trinidad, Hawaii
Pseudomonas ananas (Serr.) Serr.	Malaya?, Philippines
Potato (Solanum tuberosum L.)	
Epicaerus cognatus Sharp	Mexico
Leptinotarsa decemlineata (Say.)	Continental Europe, U.S.A.
Premnotrypes latithorax (Pierce)	Bolivia, Peru
Premnotrypes sanfordi (Pierce)	Peru
Premnotrypes solani Pierce	Peru
Premnotrypes vorax (Hust.)	Colombia, Ecuador
Rhigopsidius tucumanus Heller	Argentina, Bolivia, Chile, Peru
Heterodera rostochiensis Woll.	Europe, Algeria, Israel, Canary Islands, Iceland, U.S.A. (New York, Delaware), Canada (Newfoundland, British Columbia,) Panama, Peru, Bolivia, Chile, Argentina, India.
Oospora pustulans Owen & Wakef	British Isles, Norway, Germany, U.S.S.R., (Europe), Canada (British Columbia), New Zealand, Tasmania
Synchitrium endobioticum (Schilb.) Perc.	South Africa, Europe, Canada, U.S.A. (W. Virginia), Bolivia, Ecuador, Peru, Faulkland Islands, China, Nepal
Thecaphora solani Barrus	Mexico, Bolivia, Colombia, Ecuador, Peru, Venezuela
Rice (Oryza sativa L.)	
Chilo suppressalis Walk.	Spain, Southeast Asia, U.S.S.R., Japan, New Guinea, Philippines
Dicladispa armigera Oliv.	South and East Asia, West Irian
Nephotettrix bipunctatus F.	Asia
Parnara guttata Brem	Asia
Sesamia inferens Walk.	Asia, Hawaii, Japan, Malaysia, Philippines
Tryporhyza incertulas Walker	South and East Asia

PEST	KNOWN DISTRIBUTION
Tryporhyza innotata Walk.	Australia, Malaysia, India, Indonesia, Southeast Asia, India
Acrocylindrium oryzae Sawada	Formosa, Japan
Aphelenchoides besseyi Christie	Asia, Africa (Dahomey, Gabon, Ghana, Chad, Ivory Coast, Kenya, Malagasy Republic, Nigeria, Senegal, Sierra Leone, Togo), Italy, Bulgaria, El Salvador, Panama, Hawaii, Japan, Formosa, Philippines
Ditylenchus angustus (Butler) Filipjev	U.A.R., India, Malaysia, Pakistan, Thailand, Burma, Philippines
Entyloma oryzae Syd.	Afghanistan, Burma, Cambodia, China, India, Indonesia, Thailand, Malaysia, Hong Kong, Australia, Papua-New Guinea, Argentina, Brazil, Colombia, Venezuela, U.S.A., Surinam, Cuba, Dominican Republic, Guyana, Sierra Leone
Hirschmaniella oryzae (v. Breda de Haan) Luc & Goodey	Malagasy Republic, Ivory Coast, South Africa, Venezuela, U.S.A. (Texas, Louisiana), India, Pakistan, Thailand, Indonesia, Japan, Philippines, Malaysia
Xanthomonas oryzae (Uyeda & Ishiyama) Dowson	Ceylon, China, India, Cambodia, Korea, Laos, Nepal, Vietnam, Thailand, Malaysia, Indonesia, Japan, Philippines, Formosa?, Brunei
Stored Products	
Trogoderma granarium Everts	Africa, Europe, most parts of Asia and the Pacific Islands (excluding Hawaii)
Sugar Cane (Saccharum spp.)	
Chilotraea auricilia (Dudg.)	India, Formosa
Chilotraea infuscatella Sn.	Southeast Asia
Perkinsiella saccharicida Kird.	Africa, Australia, Hawaii, Indonesia, Mauritius, Formosa
Phragmitiphila truncata Walk.	Australia
Proceras sacchariphagus Bojer	Malagasy Republic, China, Indonesia, La Reunion, Mauritius, Pakistan, Formosa
Proceras venosatus (Wlk.)	Asia, Philippines

POST	KNOWN DISTRIBUTION
Scirpophaga nivella F.	Asia
Cintractia pulverulenta Cke. & Mass.	India
Sclerospora philippinensis Weston	India, Celebes, Philippines, South Africa
Sclerospora sacchari Miyake	Peru?, (Louisiana)?, Asia, Australia, Fiji, Formosa, Japan, Java?, New Guinea, Philippines?
Sclerospora spontanea Weston	Philippines, Thailand
Sorosporium indicum Mundkur	India
Sphacelotheca erianthi (Syd.) Mundkur	India, West Pakistan, Palestine
Sphacelotheca macrospora Yen & Wang	Formosa
Sphacelotheca sacchari (Rab.) Cif.	Italy, Central Asia, China, India, West Pakistan, Malaysia, Philippines, Iran
Sugarcane Fiji virus disease	Malagasy Republic, Australia, Fiji, Indonesia, New Guinea, New Hebrides, Philippines, Malaysia, New Britain, New Caledonia, Solomon Islands, Samoa, Mauritius
Sugarcane sereh virus disease	Indonesia (Java), Formosa
Sugarcane dwarf virus disease	Australia
Sugarcane streak virus	Egypt, Kenya, Madeira, Malawi, Mozambique, Reunion, Rhodesia, South Africa, Uganda

Sweet Potato (Ipomoea batatas L.)

Alcidodes orientalis Mshl.	East Africa
Blosyrus ipomoeae Mshl.	East Africa, Rhodesia
Cylas femoralis Faust	Africa
Cylas puncticollis Boh.	West Africa
Cylas turcipennis Boh.	India, Indonesia, Philippines
Megastes grandalis Guen	Brazil, Trinidad & Tobago
Megastes pusialis Snell	Brazil, Guyana
Omphisia anastomasalis (Guen.)	Hawaii, South and Southeast Asia
Rhyssomatus landeiroi	Central and South America
Rhyssomatus sculpturatus	Central and South America

PEST	KNOWN DISTRIBUTION
Monilochaetes infuscans Ell & Halst.	Israel, Rhodesia, Sierra Leone, Azores, Brazil, U.S.A., Hawaii, Australia, New Zealand, Japan, China, Formosa
Streptomyces ipomoea (Person & Martin) Waks. & Henrici	U.S.A.
Sweet potato witches broom virus	Japan, Papua-New Guinea

Tobacco (Nicotiana spp.)

Empoasca tabaci Pruthi	India
Gnorimoshema heliopa (Lw.)	Mediterranean Region, Asia, Australia, Far East
Gonocephalum acutangulum Fairm.	Africa
Potato witches broom virus	U.K., Bulgaria, Czechoslovakia, Italy, Poland, U.S.S.R., Canada, U.S.A., New South Wales, China, Japan
Tylenchorhynchus claytoni Steiner	Netherlands, Switzerland, U.S.A., Canada, Japan

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